

W5YI

Nation's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

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August 15, 1996

FCC Issues new Amateur Station Call Sign "Fact Sheets"

In Preparation for the Opening of "Vanity" Call Sign "Gate No. 2"

On August 1st, the FCC issued new information applying to the issuance of all Amateur station call signs. What is different about these Fact Sheets is that, for the first time, they detail additional call signs that will not be available for assignment and give new call sign numerals that will be available to stations in Alaska, Hawaii and Puerto Rico.

Follows is the complete text of new Fact Sheet No. 206-S applying to sequential call signs and Fact Sheet No. 206-V, "Vanity" call signs.

WIRELESS TELECOMMUNICATIONS BUREAU FACT SHEET

FEDERAL COMMUNICATIONS COMMISSION
1919 M STREET NW
WASHINGTON DC 20554

PR5000

#206-S

August 1996

AMATEUR STATION SEQUENTIAL CALL SIGN SYSTEM

A unique call sign is assigned to each amateur station during the processing of its license grant. The station is reassigned its same call sign upon renewal or modification of its grant, unless the licensee applies for a change to a new call sign.

Each new call sign is sequentially selected from the alphabetized regional-group list for the licensee's opera-

tor class and mailing address. The mailing address must be one where the licensee can receive mail delivery by the United States Postal Service.

Each call sign has a one letter prefix (K, N, W) or a two letter prefix (AA-AL, KA-KZ, NA-NZ, WA-WZ) and a one, two or three letter suffix separated by a numeral (0-9) indicating the geographic region (1-13). When the call signs in any regional-group list are exhausted, the selection is made from the next lower group.

The groups are:

Group A. - For primary stations licensed to Amateur Extra Class operators.

Regions 1 through 10:

- Prefix K, N or W; two letter suffix.
- Two letter prefix with first letter A, N, K or W; one letter suffix.
- Two letter prefix with first letter A; two letter suffix.

Region 11:

- Prefix AL, KL, NL or WL; one letter suffix.

Region 12:

- Prefix KP, NP or WP; one letter suffix.

Region 13:

- Prefix AH, KH, NH or WH; one letter suffix.

Group B. For primary stations licensed to Advanced Class operators.

Regions 1 through 10:

- Two letter prefix with first letter K, N or W; two letter suffix.

Region 11:

- Prefix AL; two letter suffix.

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Region 12:

- Prefix KP; two letter suffix.

Region 13:

Prefix AH; two letter suffix.

Group C. For primary stations licensed to General, Technician, and Technician Plus Class operators.

Regions 1 through 10:

Prefix K, N or W; three letter suffix.

Region 11:

Prefix KL, NL or WL; two letter suffix.

Region 12:

Prefix NP or WP; two letter suffix.

Region 13: Prefix KH, NH or WH; two letter suffix.

Group D. For primary stations licensed to Novice Class operators, and for club and military recreation stations.

Regions 1 through 10:

Two letter prefix with first letter K or W; three letter suffix.

Region 11:

Prefix KL or WL; three letter suffix.

Region 12:

Prefix KP or WP; three letter suffix.

Region 13:

Prefix KH or WH; three letter suffix.

The region and numerals are:

1. Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. The numeral is 1.
2. New Jersey and New York. The numeral is 2.
3. Delaware, District of Columbia, Maryland and Pennsylvania. The numeral is 3.
4. Alabama, Florida, Georgia, Kentucky, North Carolina, South Carolina, Tennessee and Virginia. The numeral is 4.
5. Arkansas, Louisiana, Mississippi, New Mexico, Oklahoma and Texas. The numeral is 5.
6. California. The numeral is 6.
7. Arizona, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming. The numeral is 7.
8. Michigan, Ohio and West Virginia. The numeral is 8.
9. Illinois, Indiana and Wisconsin. The numeral is 9.
10. Colorado, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota. The numeral is 0.
11. Alaska. The numerals are 0 through 9.
12. Caribbean Insular areas. The numerals are 1 through 5:
 - 1 - Navassa Island;
 - 2 - Virgin Islands;
 - 3 or 4 - Commonwealth of Puerto Rico except Desecheo Island;
 - 5 - Desecheo Island.

13. Hawaii and Pacific Insular areas. The numerals are 0 through 9:

- 0 - Commonwealth of Northern Mariana Islands;
- 1 - Baker or Howland Island;
- 2 - Guam;
- 3 - Johnston Island;
- 4 - Midway Island;
- 5 - Palmyra or Jarvis Island;
- 5 - followed by suffix letter K - Kingman Reef;
- 6 or 7 - Hawaii;
- 7 - followed by the letter K - Kure Island;
- 8 - American Samoa;
- 9 - Wake, Wilkes or Peale Island.

Certain combinations of letters are not assignable.

- These include KA2AA-KA9ZZ, KC4AAA-KC4AAF, KC4USA-KC4USZ, KG4AA-KG4ZZ, KC6AA-KC6ZZ, KL9KAA-KL9KHZ, KX6AA-KX6ZZ;
- any call sign having the letters SOS or QRA-QUZ as the suffix;
- any call sign having the letters AM-AZ as the prefix;
- any 2-by-3 format call sign having the letter X as the first letter of the suffix;
- any 2-by-3 format call sign having the letters AF, KF, NF or WF as the prefix and the letters EMA as the suffix;
- any 2-by-3 format call sign having the letters NA-NZ as the prefix;
- any 2-by-3 format call sign having the letters KP, NP or WP as the prefix and the numeral , 6, 7, 8 or 9;
- any 2-by-2 format call sign having the letters KP, NP or WP as the prefix and the numeral , 6, 7, 8 or 9;
- any 2-by-1 format call sign having the letters KP, NP or WP as the prefix and the numeral , 6, 7, 8 or 9;
- and letter combinations that prior recipients have found offensive.

[The FCC did not say what these offensive letter combinations were, but you can assume that if a suffix has been previously issued by the FCC, that it is available for assignment.]

• Call signs having the single letter prefix (K, N or W), a single digit numeral (0, 1, 2, 3, 4, 5, 6, 7, 8 or 9) and a single letter suffix are reserved for the special event call sign system. *[The letter X may not follow the numeral.]*

This Notice supersedes all previous Notices on this subject. For the procedures of the vanity call sign system, see PR-5000 #206-V, AMATEUR STATION VANITY CALL SIGN SYSTEM.

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WIRELESS TELECOMMUNICATIONS BUREAU FACT SHEET

FEDERAL COMMUNICATIONS COMMISSION
1919 M STREET NW
WASHINGTON DC 20554
PR5000

#206-V

August 1996

AMATEUR STATION VANITY CALL SIGN SYSTEM

A vanity call sign (a call sign selected by the FCC from a list of call signs requested by the station licensee or license trustee) may be requested for a primary or club station.

The request must be made by the licensee or, in the case of a club station, by the club station license trustee, on FCC Form 610-V Amateur Radio Station Vanity Call Sign Request.

It must be filed with the required fee. (See FCC Form 1070-V for mailing instructions and fee requirement.) RACES and military recreation stations are not eligible for vanity call signs.

The following call signs are not available for assignment:

- (1) KA2AA-KA9ZZ, KC4AAA-KC4AAF, KC4USA-KC4USZ, KG4AA-KG4ZZ, KC6AA-KC6ZZ, KL9KAA-KL9KHZ, KX6AA-KX6ZZ;
- (2) Any call sign having the letters SOS or QRA-QUZ as the suffix;
- (3) Any call sign having the letters AM-AZ as the prefix;
- (4) Any 2-by-3 format call sign having the letter X as the first letter of the suffix;
- (5) Any 2-by-3 format call sign having the letters AF, KF, NF or WF as the prefix and the letters EMA as the suffix;
- (6) Any 2-by-3 format call sign having the letters NA-NZ as the prefix;
- (7) Any 2-by-3 format call sign having the letters KP, NP or WP as the prefix and the numeral, 6, 7, 8 or 9;
- (8) Any 2-by-2 format call sign having the letters KP, NP or WP as the prefix and the numeral, 6, 7, 8 or 9;
- (9) Any 2-by-1 format call sign having the letters KP, NP or WP as the prefix and the numeral, 6, 7, 8 or 9.
- (10) Call signs having the single letter prefix (K, N or W), a single digit numeral 0, 1, 2, 3, 4, 5, 6, 7, 8, 9) and a single letter suffix (except X) are

reserved for the special event call sign system.

The requestor may list up to twenty-five call signs in order of preference. The exact prefix, numeral, and suffix must be given for each call sign. Requests stated in general terms such as, "Any call sign with my initials" or "Any call sign having the prefix (or suffix) ____" will be dismissed.

The first assignable call sign on the list for which the requestor is eligible will be shown on the license grant for the requestor's station and the original call sign will be vacated.

Objections to the assignment of requested call signs will not be entertained at the FCC. However, this does not hamper any party from asserting such rights as it may have under private law in some other forum.

Should it be determined by an appropriate forum that a station should not utilize a particular call sign, the initial assignment of a call sign will not serve as a bar to the making of a different assignment.

The FCC does not consider an individual to be a former holder where the call sign was originally obtained through bribery, fraud, favoritism or other improper means.

A call sign is assignable two years following license expiration, surrender, revocation, set aside, cancellation, void ab initio, or death of the grantee.

See Fact Sheet PR-5000 #206-S, Amateur Station Sequential Call Sign System, for explanations of call sign group, format, and prefix.

The exceptions are:

- **Former holder** - The two year requirement does not apply to an otherwise eligible primary station if the call sign was previously assigned to the primary, secondary, repeater, control, auxiliary link, or space station of the requestor.
- **Close relative of former holder now deceased** - Upon the death of the holder, a call sign is assignable immediately to an otherwise eligible primary station of a close relative (the holder's spouse, child, grandchild, stepchild, parent, grandparent, step-parent, brother, sister, stepbrother, stepsister, aunt, uncle, niece, nephew, or in-law).
- **Request in memoriam** - Upon the death of the holder, the call sign is assignable immediately to an otherwise eligible club station. The requestor must possess a written statement from a close relative, as listed above, of the deceased showing consent of the relative to the request.

Call sign group eligibility - is determined by the

requestor's class of operator license:

- Amateur Extra - Group A, B, C, or D.
- Advanced - Group B, C, or D.
- General - Group C or D.
- Technician Plus Class - Group C or D.
- Technician Class - Group C or D.
- Novice Class - Group D.

The only exception is:

- **Former holder** - The operator class requirement does not apply to an otherwise eligible primary station if the call sign was previously assigned to the primary, secondary, repeater, control, auxiliary link or space station of the requestor. Requestor's mailing address determines eligibility for call sign format and prefix:

Geographical designator eligibility

- One of the contiguous 48 states - Regions 1-10.
- Alaska - Regions 1-11.
- American Samoa - Regions 1-10 or a prefix in Region 13 having the numeral 8.
- Commonwealth of Northern Mariana Islands - Regions 1-10 or a prefix in Region 13 having the numeral .
- Guam - Regions 1-10 or a prefix in Region 13 having the numeral 2.
- Hawaii - Regions 1-10 or a prefix in Region 13 having the numeral 6 or 7.
- Puerto Rico - Regions 1-10 or a prefix in Region 12 having numeral 3 or 4.
- Virgin Islands - Regions 1-10 or a prefix in Region 12 having the numeral 2.

The exceptions are:

- **Former holder** - The mailing address requirement does not apply to an otherwise eligible primary station if the call sign was previously assigned to the primary, secondary, repeater, control, auxiliary link, or space station of the requestor.
- **Close relative of former holder now deceased** - The mailing address requirement does not apply to an otherwise eligible primary station of a close relative, as listed above.
- **Request in memoriam** - The mailing address eligibility requirement does not apply in the case of an otherwise eligible club station for a vanity call sign requested in memoriam. The requestor must possess a written statement from a close relative, as listed above, of the deceased showing consent of the relative to the request.

Starting Gates

Starting gates are being used to implement the sys-

tem in stages. Applications filed before the appropriate starting gate opens will be dismissed. A public notice will announce the opening of each gate.

The remaining gates are:

Gate 2. *[No date has yet been set yet for the opening of this gate, but it is expected to open about Sept. 1st.]*

- An Amateur Extra Class operator may request a Group A, B, C, or D call sign for his or her primary station.
- An Amateur Extra Class operator may request, including request in memoriam, a Group A, B, C, or D call sign for the club station for which he or she is license trustee.
- A license trustee of a club station that held a club station license grant on March 24, 1995, may request in memoriam the call sign previously shown on the station license of a deceased person who was a member of the club. (Opened at Gate 1(A).)
- A primary station licensee of any class operator may request a vanity call sign under the former holder or the close relative of former holder now deceased provisions. (Opened at Gate 1.)
- A club station licensee trustee of any class operator may request the call sign previously shown on the club station license. (Opened at Gate 1.)

Gate 3.

- An Advanced Class operator may request a Group B, C, or D call sign for his or her primary station.
- An Advanced Class operator may request, including request in memoriam, a Group B, C, or D call sign for the club station for which he or she is license trustee.

Gate 4.

- A General, Technician Plus, or Technician Class operator may request a Group C, or D call sign for his or her primary station.
- A General, Technician Plus, or Technician Class operator may request, including request in memoriam, a Group C, or D call sign for the club station for which he or she is license trustee.
- A Novice Class operator may request a Group D call sign for his or her primary station.

For further information, contact the FCC's Consumer Assistance Branch at 1-800-322-1117, or (717) 338-2500, Monday through Friday, 8 a.m. - 4:30 p.m. Eastern time.

-FCC-

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• **The second World Radiosport Team Championship (WRTC-96) was held in the San Francisco bay area the weekend of July 13-14 in conjunction with the IARU HF World Championship.** The "multi-operator, single-transmitter" event was sponsored by the Potomac Valley Radio Club and the Northern California Contest Club. PVRC had originally wanted to host the event in the Washington, DC area a year ago, but was unable to do so.

The WRTC, first held in Seattle in 1990, pits two-person teams comprised of many of the world's top DX operators from thirty countries in a head-to-head competition. Each team runs the same amount of power and operates from stations having similar antenna systems from flat terrain in the same geographical area.

Chief judge for the event, Lew Gordon, K4VX, was assisted by nineteen other judges, themselves a Who's Who of international contest winners from around the world. The rules had 52 teams running a maximum of 100 watts on the 40, 20, 15 and 10 meter bands.

The teams (who bring their own equipment) were selected by various contest clubs and organizations. In addition, ten "wild card" teams who were not selected were given the opportunity to participate.

Two exhibition teams were also added to the lineup of stations. Attending from the Peoples Republic of China was BA1OK and BA4RC. And from Latvia was YL2KL and YL3DW.

Each phone QSO counted 1 point; CW 2 points. Multipliers were the sum of the DXCC countries plus ITU zones plus IARU HQ stations. The contest lasted eighteen hours ...from 1200 UTC Saturday, July 13 until 0600 UTC Sunday, July 14. (The IARU contest ran another six hours.)

By the time it was over, some 109,000 QSOs were completed - seventy percent of which were Morse code contacts. The teams generally preferred CW since it carried a higher point value per QSO. No "packet-spotting" was allowed.

The cost of fielding the 52 teams was primarily financed by corporate sponsorship ...which included Icom, Yaesu, CQ Magazine, the Northern California DX Foundation, WJET television, Ham Radio Outlet, Shell Oil and a grant from the Lloyd Colvin Foundation which is administered by the ARRL. The Colvin Award was established in 1994 with the

proceeds of a life insurance policy purchased by Lloyd Colvin, W6KG.

Additional funding came in the form of smaller contributions from the amateur radio community. Many corporate donors pitched in with equipment ...and with such contest staples as pizza and beer!

The event was professionally videotaped by a ABC crew from WJET-TV, Erie, PA. Plans are to make the video available to network TV and to ham radio clubs.

The overall winner of the 1996-World Radiosport Team Competition was Jeff Steinman, KRØY and Dan Street, K1TO. They operated as W6X.

Ironically, the FCC initially agreed to issue 52 one-by-one call signs: W6A through Z ...and K6A through Z to the WRTC effort. But the call signs K6X and W6X were later withdrawn when it was determined that they could not be used as amateur radio station call signs.

Part §2.302 of the FCC Rules specifically preclude one-by-one call signs where the letter "X" follows the numeral. The word apparently never filtered down to the WRTC and the eventual winner was: W6X.

The winning station used a Hy-Gain TH-6 yagi beam at 50 feet, an inverted-V dipole for 40 meters and two Icom IC-765 HF transceivers running 100 watts.

QSL cards and other awards will be sent to stations whose call sign appears in the WRTC station logs. Here is the final results as released by Lew, K4VX.

Call	Country	Op#1	Op#2	Score
W6X	USA	KRØY	K1TO	761829
K6T	USA	K4BAI	KM9P	678132
W6R	USA	K6LL	N2IC	655720
K6P	Canada	VE3EJ	VE3IY	647112
K6C	USA	K4UEE	N6IG	644059
W6T	USA	K5ZD	WX3N	616308
W6D	USA	K1KI	K3UA	606550
W6Q	Croatia	9A3A	S53R	598272
W6V	USA	KF3P	KR2J	577575
W6P	USA	K8CC	K5GO	568435
K6V	USA	W2GD	W0UA	568378
W6F	Finland	OH2IW	OH1JT	565000
K6W	USA	N6TV	K7SS	556928
W6I	USA	K1AR	K1DG	547404
W6Y	Germ.	DL1IAO	DK3GI	545758
K6D	Germ.	DL5XX	DL1VJ	532728
K6R	Bulgar.	LZ1SA	LZ2PO	531552
K6G	USA	NP4Z	WC4E	527592
W6A	USA	K3LR	WA8YVR	523672
K6X	Russia	UA3DPX	RZ9UA	518666
K6Z	Japan	JH4NMT	JE3MAS	512535
W6S	Lithuan.	LY2IJ	LY1DS	509392
W6B	Sloven	S59A	S56A	507318
K6Y	Czech.	OK1CF	OK2PAY	499796
W6H	Russia	EW1AC	RV1AW	497965
K6I	Japan	JH7PKU	JO1BMV	488940
K6S	Belg.	ON4UN	ON9CIB	480326

Call	Country	Op#1	Op#2	Score:
W6U	Spain	EA1AK	EA4KR	470744
W6G	Japan	JE1JKL	JH7WKQ	470237
K6U	Swed.	SM3DMP	SM3CER	465075
W6O	S.Africa	ZS6EZ	ZS6NW	461553
K6O	USA	WN4KKK	N6TR	454476
W6E	Spain	EA7TL	EA9KB	445356
K6N	Yugosl.	YT1AD	YU1RL	437167
W6W	Argent.	LU6ETB	OHØXX	437016
K6J	USA	N2NT	KZ2S	426656
W6K	France	F6FGZ	K5MUX	418375
K6A	Japan	JH4RHF	JA8RWU	412388
K6H	Germ.	DJ6QT	DJ2YA	411376
K6K	Ukraine	UT5UGR	UT4UZ	398399
K6F	Italy	IT9BLB	IT9VDQ	383280
K6M	U.King.	GIØNWG	G3OZF	383437
K6B	Croatia	9A9A	9A3GW	383166
K6Q	Canada	VE7NTT	KØKR	362440
K6E	Hung.	HAØMM	HAØDU	357885
W6Z	Austral.	VK5GN	VK2AYD	343604
W6J	Poland	SP6AZT	SP9FKQ	330876
W6L	Kazak.	UN4L	UN2L	309518
K6L	Poland	SP9HWN	SP9IJU	298178
W6N	Italy	I4UFH	I2VXJ	269028
W6M	Brazil	PYØFF	PY5CC	231066
W6C	Italy	IN3QBR	IT9TQH	185070

(With thanks to W6OAT and K1DG.)

• P3-D to launch on Ariane 502.

It's now official...AMSAT's Phase 3-D International Amateur Radio Satellite will be a passenger on the next launch of the European Space Agency's (ESA) Ariane 5 mission, AR 502.

The launch of Phase 3-D on AR 502 has now been formally slated by ESA to occur "...within the first six months of 1997". AMSAT officials are now working to complete all integration and testing efforts for the Phase 3-D satellite in time for a launch that could come as early as mid-February, 1997.

The decision to re-confirm launch of Phase-3-D via AR 502 was made immediately following a series of high level meetings between AMSAT and ESA officials at ESA's Headquarters in Paris, France on July 23rd and 24th attended by Phase 3D Project Leader Dr. Karl Meinzer, DJ4ZC, AMSAT-NA Executive Vice President Keith Baker, KB1SF and AMSAT-NA Vice President for Engineering Dick Jansson WD4FAB. These meetings occurred in conjunction with ESA's public announcement of results from their formal Inquiry Board investigating the failure of the first Ariane 5 launch, AR 501, in early June.

AMSAT-NA President Bill Tynan, W3XO, said "This still places responsibility for completion and testing of Phase 3-D firmly in our court. We must still finish final integration and testing of the satellite by year end, conduct the launch campaign, and insure the necessary funds are secured to do so."

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August 15, 1996

FCC CREATES NEW "LOW POWER RADIO SERVICE"

During the past three months, the Federal Communications Commission has established two new unlicensed personal radio services and eliminated the need for operators of radio stations aboard pleasure boats and aircraft to hold individual licenses.

The Family Radio Service (FRS) will operate on channels overlapping the 462 and 467 MHz allocations of the General Mobile Radio Service (GMRS), CB's predecessor. FRS is a new unlicensed, low power (half watt), short range UHF personal radio service designed to meet the communication needs of families and groups. The service will use 14 frequencies located in between full power GMRS 462/467 MHz channels.

Originally proposed in April 1995, the FCC announced at the end of July that it was creating still another new personal radio service to be known as the Low Power Radio Service (LPRS) in the 216-217 MHz band.

An FM systems manufacturer petitioned the FCC for LPRS use in the 1.25-m band which had been used at one time for aircraft beacons. LPRS will operate under Part 95 of the Commission's rules ...the same as CB. But it will not be authorized for two-way personal communications.

The new radio service -- authorized on a secondary, non-interference basis -- accommodates four types of communication:

1. LETS (Law Enforcement Tracking Systems) or "beacon bucks"; flat (and foldable) transmitters disguised as paper currency for theft tracking;
2. AADs (Auditory Assistance Devices) used in the education of the hearing impaired and in churches and theatres;
3. Health care assistance devices, such as medical telemetry and listening devices, and;
4. Control stations in the Automated Maritime Telecommunications Service.

AMTS is a two-way communications system for vessels operating on inland and coastal waterways. AADs amplify and transmit sound to individuals with hearing disabilities. Existing auditory assistance devices currently operate on an unlicensed basis in the 72-76 MHz band but many are rendered useless by wireless interference ...especially pagers.

The FCC said "LPRS promotes the Commission's goal of fostering efficient and effective utilization of radio spectrum because it establishes a use for the 216-217 MHz band, which had been found unusable for high power communications due to the potential for interference to television (TV) channel 13 reception."

Initially the FCC proposed to allocate the 30 channels on a licensed basis. But the Commission has decided to

authorize LPRS transmitters by rule, rather than by individual licenses for each transmitter. This will promote the rapid deployment of these devices without imposing unnecessary regulatory burdens on the public. The FCC also has a campaign underway to eliminate the necessity of issuing individual licenses where possible.

In addition, to reduce the potential for harmful interference to other LPRS devices, AMTS and TV reception, these transmitters must be type accepted in accordance with technical standards set forth in the rules.

Under the technical standards for LPRS, manufacturers will have the flexibility to produce narrowband (5 kHz), standard band (25 kHz), or wide band (50 kHz) equipment with all transmissions limited to 100 milliwatts effective radiated power (ERP).

PLEASURE BOAT AND AIRCRAFT RADIO STATION LICENSING ABOLISHED

The 1996 *Telecommunications Act* grants the FCC authority to remove the individual radio station licensing requirement for recreational vessels and aircraft that operate domestically when it determines that the public interest, convenience and necessity is served.

Although no final action has yet been taken, the Commission has approved interim measures that immediately eliminate the Maritime and Aviation Services rules that previously required individual ship and aircraft radio licensing. They will now be "blanket licensed" by rule.

The FCC said the proposed action is in the public interest because it would eliminate administrative burdens for both the public and the Commission without having a negative impact on safety or spectrum management in the Maritime and Aviation Services. The FCC concluded

1. that individual licenses are neither necessary for the safety or operational requirements of pleasure vessels and aircraft;
2. that individual licensing is unnecessary to meet the Commission's regulatory and spectrum management responsibilities, and;
3. that eliminating the individual licensing requirement will remove an unnecessary regulatory burden on the public, and;
4. an administrative licensing hardship for the FCC.

Prior to enactment of the 1996 *Telecommunications Act*, the FCC only had discretion to license radio stations in the Citizens Band (CB) and Radio Control (R/C) services by blanket rule rather than by individual licenses. The Commission ended its licensing of CB and R/C in 1983 because no individual testing was necessary, the existence of a data base of licensees did not assist the FCC in enforcement procedures and individual licensing

was very costly and administratively burdensome.

By treaty, ship and maritime radio stations used for international communications and traveling to foreign locations must be individually licensed. The Communications Act also requires some commercial vessels and aircraft to be licensed. Although no statute requires recreational vessels and aircraft to be equipped with a radio station, FCC rules required those that did to be individually licensed.

According to FCC licensing records, there are nearly 600,000 individual ship station and 150,000 aircraft station licensees operating domestically that are not subject to the radio carriage requirements of any statute or treaty.

The FCC has now issued a Notice of Proposed Rule-making saying it will remove the individual radio licensing requirement for these vessels and aircraft. Under the proposal, the public would be authorized to operate a marine or aircraft VHF radio, any type of emergency position indicating radio beacon (EPIRB) or emergency locator transmitter (ELT), and/or radar on board a recreational vessel or aircraft without an individual license.

The FCC said that station licenses are not needed as a means of identification since the name of the vessel is usually used for domestic identification, and could readily replace the use of FCC-issued call signs. In the case of aircraft, the Commission's individual licensing duplicates that of the Federal Aviation Administration (FAA). The FAA assigns each aircraft an identification number, which then becomes the FCC call sign. Ship and aircraft radio stations would still be subject to the Commission's Rules and enforcement procedures.

The FCC added that "...eliminating the individual licensing requirement will not have a negative impact on safety at sea or safety of air navigation since operators of recreational vessels and aircraft are not currently required to pass a test or in any way demonstrate knowledge of radio procedures prior to licensing. Rather, we rely on cooperative efforts by informed radio users to distribute distress communications and safety information...

"We anticipate that recreational vessel and aircraft operators will continue to learn about the proper use of marine and aircraft radios through instructional courses and through public forums established by various organizations such as the U.S. Coast Guard Auxiliary, the FAA, and the Commission."

The FCC implemented the proposed rules immediately pending the conclusion of the proceeding which will be expedited.

The FCC action thus eliminates the filing of approximately 125,000 license applications each year by operators of recreational ship and aircraft stations and the \$45.00 filing fee. Persons traveling to foreign ports, making international flights, or engaging in international communications must continue to be licensed individually.

AMATEUR RADIO STATION CALL SIGNS

...sequentially issued as of the first of August 1996:

Radio District	Gp."A" Extra	Gp."B" Advan.	Gp."C" Tech/Gen	Gp."D" Novice
0 (*)	AB0CL	KI0DX	(***)	KB0WWZ
1 (*)	AA1QJ	KE1FS	N1XSM	KB1BYX
2 (*)	AB2BV	KG2HV	(***)	KB2ZOZ
3 (*)	AA3OR	KE3XD	N3XXK	KB3BPN
4 (*)	AE4WV	KT4UJ	(***)	KF4LDT
5 (*)	AC5JD	KM5CH	(***)	KC5VOO
6 (*)	AC6WV	KQ6IB	(***)	KF6FLG
7 (*)	AB7RW	KJ7ZS	(***)	KC7SEA
8 (*)	AA8XS	KG8VE	(***)	KC8ENT
9 (*)	AA9TB	KG9HP	(***)	KB9OEV
N. Mariana	NH0A	AH0AW	KH0FA	WH0ABF
Guam	WH2V	AH2DB	KH2QT	WH2ANR
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	(**)	AH6OT	(***)	WH6DCN
Kure Is.			KH7AA	
Amer.Samoa	AH8O	AH8AH	KH8DA	WH8ABF
Wake W.Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska	(**)	AL7QM	KL0AH	WL7EKK
Virgin Is.	WP2X	KP2CJ	NP2JK	WP2AIE
Puerto Rico	(**)	KP3AG	NP3EG	WP4NMH

* = All 1-by-2 & 2-by-1 call signs have been assigned.

** = All 2-by-1 call signs have been assigned.

*** = Group "C" (N-by-3) call signs have now run out in all but the 1st and 3rd call district.

Note: KP3/NP3 call signs now assigned in Puerto Rico.
[Source: FCC, Gettysburg, Pennsylvania]

NEW AND UPGRADING AMATEUR STATISTICS FOR THE MONTH OF JULY 1995 vs JULY 1996

License Class	New Amateurs		Upgrading Amateurs	
	1995	1996	1995	1996
Novice	37	74	0	0
Technician	1779	1728	2	2
Tech Plus	246	125	312	303
General	108	50	412	313
Advanced	21	3	237	234
Extra Class	5	7	282	204
Club	143	42	0	10
Total:	2339	2029	1245	1056
Increase/(Decrease):	(13.3%)		(15.2%)	

FCC UPDATES RADIO FREQUENCY GUIDELINES

The FCC has adopted new guidelines and methods for evaluating the environmental effects of radiofrequency ("RF") emissions from FCC-regulated transmitters including cellular telephone, amateur radio, radio and television broadcast and satellite communications antennas.

The Commission said the updated guidelines generally are more stringent than the current rules, and are

based on recommendations of the federal health and safety agencies, including the Environmental Protection Agency and the Food and Drug Administration. The Commission stated that the new rules will protect the public and workers from strong RF emissions.

In ET Docket No. 93-62, the Commission has adopted Maximum Permissible Exposure ("MPE") limits for electric and magnetic field strength and power density for transmitters operating at frequencies from 300 kHz to 100 GHz. These MPE limits are generally based on recommendations of the National Council on Radiation Protection and Measurement ("NCRP") and, in many respects, are also generally based on the guidelines issued by the Institute for Electrical and Electronics Engineers, Inc. ("IEEE") and subsequently adopted by the American National Standards Institute ("ANSI") as an ANSI standard (ANSI/IEEE C95.1-1992).

The Commission also adopted limits for specific absorption rate ("SAR") for evaluating certain hand-held devices, such as cellular and PCS telephones, based on ANSI/IEEE and NCRP recommendations.

The new RF guidelines will apply to applications for stations filed with the FCC after January 1, 1997. The Commission said this should provide a reasonable transition period for parties to come into compliance with the new requirements. Guidelines and requirements for evaluation of hand-held devices will apply immediately. Here is what the FCC had to say about amateur radio. This is a direct quote from ET Docket No. 93-62:

Amateur Radio

"Amateur stations present an unusual case with respect to compliance with RF exposure guidelines. First, over 700,000 amateur stations in the United States are authorized by our rules to transmit from any place where the Commission regulates the service, as well as on the high seas. The Commission does not pre-approve individual amateur station transmitting facilities and no additional application is made for permission to relocate an amateur station or to add additional stations at the same or other locations.

"Second, the granting of a license is solely conditional upon the applicant passing an examination demonstrating that the examinee possesses the operational and technical qualifications required to perform properly the duties of an amateur operator under our rules.

"Third, amateur stations vary greatly. Amateur stations are located in dwellings, in air, surface and space craft, and carried on the person. Many of these stations transmit from residential or other areas where individuals may be in close proximity to an RF radiator. In addition, amateur station transmissions are made intermittently and may involve as many as 1,300 different emission types -- each with a distinctive on-off duty cycle.

"Finally, most amateur stations engage only in two-way communications. Thus, even when in operation, the station is usually transmitting but half of the time. There are many variables, therefore, to be considered in determining whether an amateur station complies with guidelines for environmental RF radiation.

"Measurements made during a Commission/EPA study of several typical amateur stations in 1990 indicated that there may be some situations where excessive exposures could occur. Further, among amateur operators themselves there appears to be varying degrees of knowledge concerning the potential hazards of RF radiation. At least one prominent amateur radio publication has a comprehensive section dealing with potential RF hazards at amateur stations.

"Comments on continuing to exempt amateur stations from demonstrating compliance are divided. The ARRL opposes inclusion, and claims that most amateur operators adopt the philosophy of prudent avoidance, that is, they avoid unnecessary exposure to electromagnetic radiation as a common-sense response to potential -- but not yet proven -- health hazards.

"The ARRL also states that its publications, which include sections on RF safety, urge amateur operators to practice prudent avoidance wherever possible and are sufficient to keep the amateur community informed of the hazards of RF radiation. The ARRL and the ARRL Bio-Effects Committee support 'prudent avoidance' and state that most amateur operators do not possess the requisite equipment, technical skills, and/or financial resources to conduct an environmental analysis if the categorical exclusion for Part 97 were eliminated.

"The ARRL argues that amateur stations, because of their intermittent operation, low duty cycles, and relatively low power levels, rarely exceed the 1992 ANSI/IEEE standard. Further, the ARRL suggests that the risk of exceeding those levels would only be relevant for a licensee and his or her family. The ARRL maintains that in this experimental service it is better to rely on education and testing of licensees than on submission of a complex environmental assessment which would not be valid for long in most cases since much amateur station transmitting equipment, especially antennas, is constructed and designed by the licensee and often changes. Therefore, the ARRL argues that amateur service licensees should not be subjected to routine environmental processing.

"The ARRL states that if the Commission applied these rules to the amateur radio service, it then must facilitate the installation of amateur station antennas in configurations that will permit compliance with the RF exposure guidelines by issuing a more comprehensive preemption statement with respect to amateur station antennas than now exists, and must completely preempt the judicial enforcement of restrictive covenants which result in amateurs installing station antennas indoors or at locations on a horizontal plane with human occupants of residences. Indeed, the ARRL continues, such an order is overdue anyway; but the combination of adoption of a strict RF exposure standard and continuation of a hands-off attitude with respect to antenna covenants is tantamount to a license revocation, as it would preclude the operation of any amateur station subject to both restrictions.

"The ARRL Bio-Effects Committee claims that amateur operators normally would be exempted from environmental review requirements, since most engage in operations that would not cause the ANSI/IEEE guidelines to be exceeded. However, it notes, a 100 watt VHF 'vehicular installation' may produce higher fields inside the vehicle than the ANSI/IEEE standard would allow. Furthermore, hand-held transceivers, facilities employing indoor antennas, and facilities engaging in specialized activities such as "moonbounce" communication, may produce significant localized fields near the antenna.

"Further, the ARRL Bio-Effects Committee notes that a comprehensive environmental review would be too burdensome both for the amateur operators and the Commission staff. It therefore recommends that a tabular chart showing the calculated field intensities at various distances from antennas having directive patterns, driven by transmitters of various power output levels common in the amateur service be added to Part 97.

The ARRL Bio-Effects Committee also recommends inserting questions about electromagnetic radiation safety in each amateur operator license examination and requiring certification on the license application that the applicant has read the Commission guidelines, understands them, and agrees to comply. Under this scheme, the ARRL Bio-Effects Committee argues, amateur operators would follow the policy of "prudent avoidance" that the ARRL publications now advocate.

"Professor Wayne Overbeck, N6NB, filing comments as an individual, believes that few amateur operators are aware of the electromagnetic radiation levels present near their own amateur stations and that rather than being excluded from our requirements, the amateur service should be subject to the standard for "uncontrolled environments" through language added to Part 97.

"Professor Overbeck points out that vast numbers of amateurs are neither members of the ARRL nor subscribers to any amateur service magazines and consequently these educational sources are not sufficient to ensure adherence to our guidelines. Because actual measurements would be financially prohibitive for most amateur operators, Professor Overbeck recommends that we promulgate a rule requiring amateur operators to adopt operating and antenna-placement practices calculated to meet the exposure limits and that they be required to certify on their application forms that they have read and will adhere to the guidelines for antenna placement.

"Finally, Professor Overbeck suggests that we promulgate an amateur service version of OST [Office of Science and Technology] Bulletin No. 65 that would include charts and tables showing required separation distances between antennas and inhabited areas for various power levels. He also suggests that amateurs be tested on this topic as part of operator license examinations.

"Decision. The Commission expects all its licensees to comply with the RF guidelines specified in our rules, or, if not, to file an Environmental Assessment (EA) for review under our NEPA procedures. After a thorough review of the comments and the results of an FCC/EPA measurement study, we conclude that, although it appears to be relatively small, there is a potential for amateur stations to cause exposures to RF radiation in excess of these guidelines.

"Amateur stations can transmit with up to 1500 watts peak envelope power on frequencies in specified bands from 1,800 kHz to over 300 GHz. Certain of the emission types permitted have high duty cycles, for example frequency or phase shifted digital signals. Amateur stations are not subject generally to restrictions on antenna gain, antenna placement and other relevant exposure variables.

"Even though situations where exposures are excessive may be relatively uncommon and even though most amateur stations transmit for short periods of time at power levels considerably lower than the maximum allowed, the possibility of human exposure to RF radiation in excess of the guidelines cannot be disregarded. Therefore, a blanket exemption for all

amateur stations does not appear to be justified, and we will apply our new guidelines to amateur stations.

"We will rely upon amateur licensees to demonstrate their knowledge of our guidelines through examinations. We will also rely on amateur licensees to evaluate their own stations if they transmit using more than 50 watts of output power. Applicants for new licenses and renewals also will be required to demonstrate that they have read and that they understand our applicable rules regarding RF exposure.

"We find it to be the duty of the licensee of an amateur station to prevent the station from transmitting from any place where the operation of the station could cause human exposure to levels of RF radiation that are in excess of the limits we are adopting.

"We concur with the ARRL that amateur operators should follow a policy of prudent avoidance of excessive RF exposure. We will continue to rely upon amateur operators, in constructing and operating their stations, to take steps to ensure that their stations comply with the MPE limits for both occupational/controlled and general public/uncontrolled environments. In this regard, we recognize and agree with the ARRL's position that the occupational/controlled limits generally can be considered adequate for situations involving amateur stations considering the most commonly used power levels, intermittent operation and frequencies involved.

"We recognize that operation in the amateur radio service presents certain unique conditions. Nonetheless, we are concerned that amateur radio operations are likely to be located in residential neighborhoods and may expose persons to RF fields in excess of the MPE guidelines. We will consider amateur radio operators and members of their immediate household to be in a 'controlled environment' and will apply the occupational/controlled MPE limits to those situations.

"Neighbors who are not members of an amateur operator's household, are considered to be members of the general public, however, since they cannot reasonably be expected to exercise control over their exposure. In those cases general population/uncontrolled exposure MPE limits will apply.

"We believe that the burden for action to assure compliance with RF exposure limits should fall on the relatively few licensees who operate stations that can potentially cause individuals, knowingly or unknowingly, to be exposed to RF energy in excess of these guidelines. We want the licensees of such stations to provide adequately for RF safety.

"We do not believe, however, that a detailed EA or other routine environmental filing is practical or necessary. To make the complex determination of possible excessive exposure as simple as possible, we are specifying a threshold limit for transmitter power that will apply regardless of frequency used.

"Below 50 watts transmitter power, the licensee will not be required to take any action, unless requested by Commission staff pursuant to Section 1.1307(c) or 1.1307(d) of our rules. Above this power threshold, the licensee must perform a routine evaluation to predict if the RF radiation could be in excess of that allowed by the criteria listed in § 1.1310. If so, the licensee must take action to prevent such an occurrence.

"The action could be in the form of altering operating patterns, relocating the antenna, revising the station's technical parameters such as frequency, power or emission type or combinations of these and other remedies. To assist with routine evaluation of exposure levels in accordance with the

guidelines, we encourage the amateur community to develop and disseminate information in the form of tables, charts and computer analytical tools that relate such variables as operating patterns, emission types, frequencies, power and distance from antennas.

"We also intend to provide straightforward methods for amateur operators to determine potential exposure levels. This information could be included in our updated version of OST Bulletin No. 65, or we may follow the suggestion to develop a separate bulletin tailored for the amateur service community.

"As a result of the adoption of a transition period, which was discussed earlier, the new guidelines will apply to amateur stations beginning January 1, 1997. This should provide sufficient time for the amateur community and the Commission staff to prepare the necessary information to help amateur operators comply with these requirements.

"As suggested by the ARRL, the ARRL Bio-Effects Committee and Professor Overbeck, we are amending our rules to require the operator license examination question pools to include questions concerning RF safety at amateur stations. We are requiring an additional five questions on RF safety within each of three written examination elements. We also are adopting ARRL's proposal that amateur operators should be required to certify, as part of their license application process, that they have read and understand our bulletins and the relevant FCC rules. We will rely on our Wireless Telecommunications Bureau to develop suitable methods for obtaining this certification."

The new Part 97 Rules

Section 97.13 is amended by adding paragraph (c) to read as follows:

§ 97.13 Restrictions on station location.

(c) Before causing or allowing an amateur station to transmit from any place where the operation of the station could cause human exposure to levels of radiofrequency (RF) radiation in excess of that allowed under § 1.1310 of this chapter, the licensee is required to take certain actions. A routine RF radiation evaluation, as discussed in § 1.1307(b) of this chapter, is required if the transmitter power exceeds 50 watts peak envelope power; otherwise the operation is categorically excluded from routine RF radiation evaluation except as specified in § 1.1307(c) and § 1.1307(d) of this chapter. Where the routine evaluation indicates that the RF radiation could be in excess of the limits contained in § 1.1310 of this chapter, the licensee must take action to prevent such an occurrence. Further information on evaluating compliance with these limits can be found in the FCC's OST/OET Bulletin Number 65, "Evaluation Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation."

Section 97.503 is amended by revising paragraphs (b)(1), (b)(2), and (b)(3), and adding paragraph (c)(10) to read as follows:

§ 97.503 Element standards.

- (b) * * *
- (1) Element 2: 35 questions concerning the privileges of a Novice Class operator license. The minimum passing score is 26 questions answered correctly.
- (2) Element 3(A): 30 questions concerning the

privileges of a Technician Class operator license. The minimum passing score is 22 questions answered correctly.

(3) Element 3(B): 30 questions concerning the privileges of a General Class operator license. The minimum passing score is 22 questions answered correctly.

Passing Exams 22 questions answered correctly.						
* * * * *						
(c) * * *						
Topics:	Element:	2	3(A)	3(B)	4(A)	4(B)
* * *	* * *					
(10) Radiofrequency		5	5	5	0	0
environmental safety						
practices at an amateur station						
* * * * *						

Comments of Wayne Overbeck, N6NB.

We have been in contact with Dr. Overbeck and follows is what he believes are the ramifications of the FCC's new RF safety guidelines:

"Basically, here are what I see as the highlights from the perspective of amateur radio:

1. Amateur radio is no longer categorically exempt from the FCC's RF safety rules. All amateurs whose output power exceeds 50 watts must comply with the new rules.
2. To comply, amateurs must do a routine evaluation under guidelines to be explained in a new version of OET Bulletin No. 65. All amateurs will really need to do is look at charts and tables to be sure that their power, frequency, operating habits, antenna gain and antenna placement do not combine to produce fields exceeding the newly adopted standards (which are a combination of the 1992 ANSI/IEEE standard and the NCRP standard, which is stricter in some respects).
3. Amateurs' households will be classified as "controlled environments" for RF safety standards, while their neighbors' homes will be treated as "uncontrolled environments," with the exposure limits five times lower in uncontrolled environments.
4. Amateurs will be asked to certify that they comply with the RF safety rules at license renewal time.
5. Five more questions concerning RF safety are to be added to Elements 2, 3A and 3B of the exams.

"After reading the new rules, my feeling is that this will not pose a problem for amateurs. There really isn't any enforcement mechanism; it's really a voluntary system. And the standards are such that most amateur stations will easily comply. In worst-case situations, it might be necessary to move an antenna away from populated areas, or perhaps to refrain from pointing a high-gain moonbounce array at a neighbor's house! Normal antenna configurations at normal heights will not be a problem. However, an amateur with an antenna on the wall of a condo might be exposing the neighbor on the other side of the wall to an excessive RF field, especially if the power level is high at, say, 144 MHz."